CMPT580 Course Outlines

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Materials To Be Covered

Chapters 3 through 9 of *Computer Organization and Design—The Software/Hardware Interface* by J. Hennessy and D. Patterson.

- Prerequisites: high-level language programming, assembly programming, fundamentals of digital design.
- The instruction set of computer MIPS.
- Arithmetic for computers: addition, subtraction, multiplication and division.
- Design of MIPS processor. Combinational approach and microprogramming technique.
- Pipeline technique for improving performance.
- Exploiting memory hierarchy: the concepts of caches, virtual memory and issues about them.
- Issues on processors-peripheral interfacing.
- If time allows, we will discuss topics in parallel processing.

Class Schedule

Class meets once a week on Wednesday, 8:15–10:45 PM, in Room RI-117. Students’ attendance is required.

Office Hours

Wednesday, 7:00–8:00 PM. Other times by appointment.

Homeworks, Exams and Grades

Homeworks will be assigned at appropriate stages of the course. The purpose of homeworks is to make you further understand the materials discussed in class. The assignments will be graded and will be part of your final grades.

Final Examination will be given on Wednesday, December 15, 8:15–10:15 PM. Midterm test will be sometime near the end of October.

The final grades are decided based on homeworks (30%), midterm (30%) and final exams (40%).